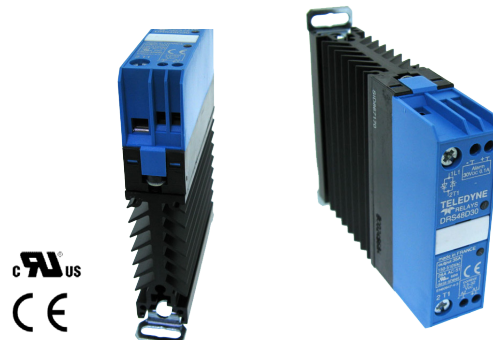


**FEATURES/BENEFITS**

- AC Semiconductor Contactor with Diagnostic
- Compact size and DIN rail mounting
- Zero Cross switch ON in case of overvoltage
- Large control range: 3-32Vdc
- IP20 housing
- UL conformity



Part Number	Description
DRS24D25	32A, 280 Vac, 3-32 Vdc Control

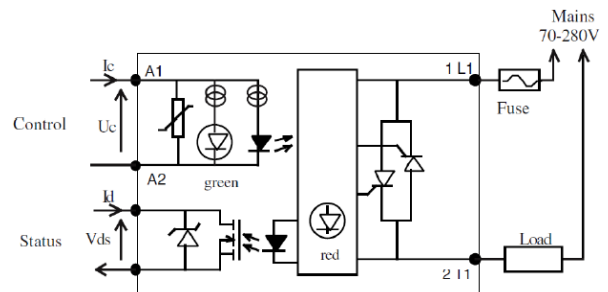
**NOTES**

- 1) Line Voltage (nominal): 24 = 240 Vac
- 2) Switch Type: D = Zero-cross turn-on

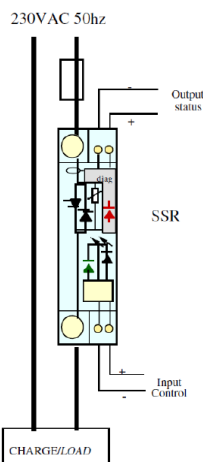
**ELECTRICAL SPECIFICATIONS**  
(+25°C ambient temperature unless otherwise specified)

**INPUT (CONTROL) SPECIFICATIONS**

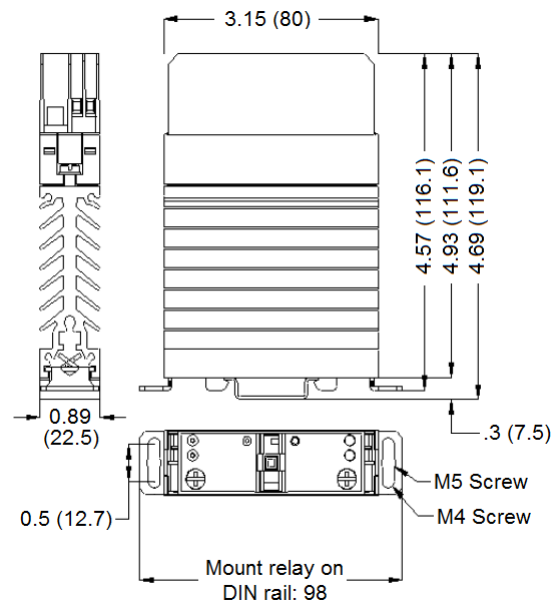
	Min	Max	Units
Control Range	3	32	Vdc
Control Current		<10	mA
Release Voltage	2		Vdc
Input LED		Green	
Reverse Voltage		32	Vdc
Clamping Voltage		42	Vdc
Input Immunity EN61000-4-4	2		kV
Input Immunity EN61000-4-5	2		kV



**Figure 1. Block Diagram**



**Figure 2. Typical Application**



**Figure 3. Dimensions**

\*Shown in inches (millimeters)

**ELECTRICAL SPECIFICATIONS**

(+25°C ambient temperature unless otherwise specified)

**OUTPUT (LOAD) SPECIFICATIONS**

	Min	Max	Units
Operating Range	12	940	Vdc
Peak Voltage		1200	V <sub>peak</sub>
Zero Cross Level		14	V
On State Voltage Drop (typical)		0.9	V
Dynamic Resistance (typical)		8	mΩ
Off State Leakage Current		5	mA
Minimum Load Current		100	mA
Turn On Time		10	ms
Turn Off Time		10	ms
Operating Frequency Range	40	440	Hz
Off State dv/dt		500	V/μs
Maximum di/dt Non Repetitive		50	A/μs
I <sup>2</sup> t (<10ms)		1500	A <sup>2</sup> s

Conducted Immunity Level IEC 1000-4-4 (burst)  
4kV criterion B

Conducted Immunity Level IEC 1000-4-5 (Surge)  
4kV criterion B

**GENERAL CHARACTERISTICS (at 25°C)**

	Units
Input to Output Insulation	4000 Vrms
Output to Status Insulation	2500 Vrms
Output to Case Insulation	4000 Vrms
Insulation Resistance	100(@500Vdc) MΩ

Vibration Resistance 10-55Hz	1.5	mm
Shock Resistance (on DIN rail w/ screws)	30/50	g

	Min	Max	Units
Ambient Temperature	-40	80	°C
Storage Temperature	-40	100	°C
Ambient Humidity	40	85	%

**STATUS OUTPUT CHARACTERISTICS (at 25°C)**

	Min	Max	Units
Voltage Range	1	32	V
Output Current	0	0.1	A
On Resistance		2	Ω
Open Delay (faults)		70	ms
Total Open Delay (faults)		120	ms
Closed Mains Delay		20	ms
Maximum Cable length for Open Load		40	m

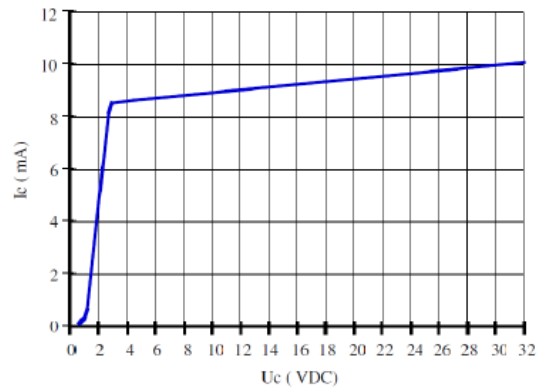


Figure 4. Control Characteristics

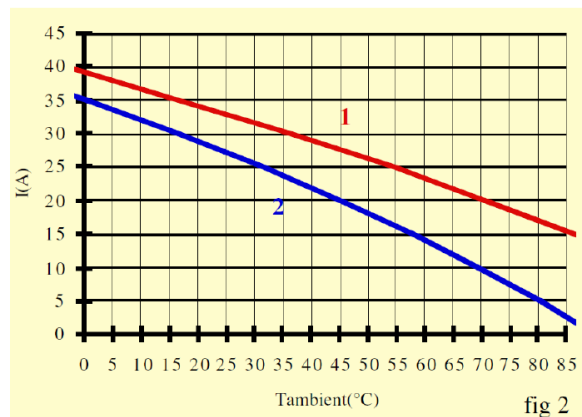
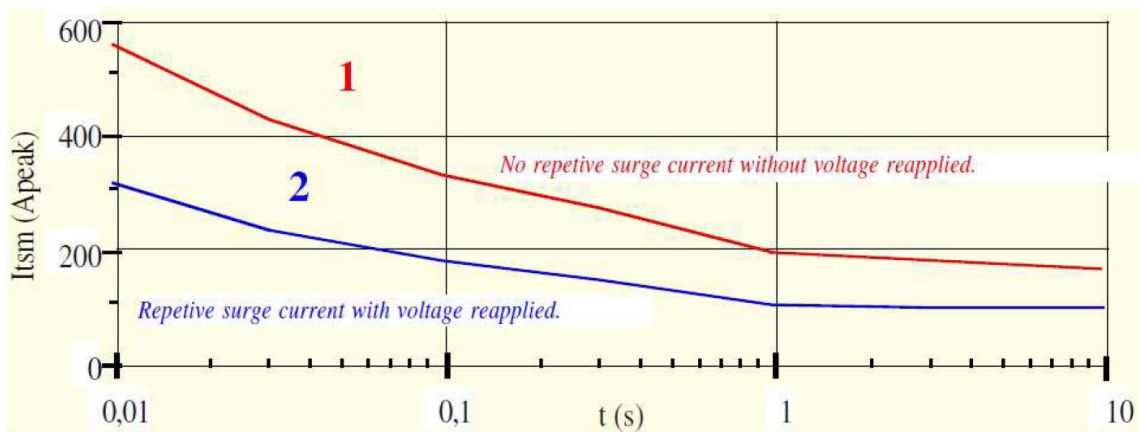


Figure 5. Thermal Curves

**Diagnostic & Status Outputs**

Control	Control LED	Mains	Load	SSR	Status LED	Status
0	○	No	x	x	○	Open
1	●	No	x	x	○	Open
0	○	Yes	OK	OK	●	closed
1	●	Yes	OK	OK	●	closed
0	○	Yes	Open	OK	○	Open
0	○	Yes	OK	short-circuit	○	Open
1	●	Yes	Open	OK	○	Open
1	●	Yes	OK	short-circuit	○	Open



**Figure 6. Surge Current**